Visually enhancing rotating addition for a wheel

ABSTRACT

The current invention pertains to an apparatus that is a rotary addition adaptable to, for example, wheel rims for motor vehicles. The device includes a rotary base that is coupled to the rim of a wheel for the intent of rotation of a secondary rotating section. The rotating section would be coupled to the rotary base allowing itself to rotate with or without a delayed reaction dependant on the rotation of the wheel rim. The apparatus could also be capable of rotating in the counter direction of the wheel rim with or without a delayed reaction dependent on the rotation of the wheel rim.

CLAIMS

1) A mechanism used to rotate a component of a wheel rim or something attached to a wheel rim in the opposite direction the wheel rim is rotating. This mechanism will produce a counter rotation as compared to the rotation of the wheel. The mechanism will consist of a bearing and sprocket system that is connected to the wheel rim.

2) A mechanism that will take the rotation of a wheel and produce a counter rotation as claimed in claim 1. The mechanism will consist of a set of sprockets on shafts. The initial sprocket will be on a shaft extended from the center of the wheel rim. A second shaft and sprocket set will consist of two sprockets and one shaft and will be engaged with the initial sprocket and shaft. The second sprocket and shaft set will thus rotate counter to the initial sprocket and shaft. This second sprocket and shaft set will be engaged to a third sprocket and shaft set. The third sprocket and shaft set will consist of two sprockets and one shaft and will rotate opposite the second sprocket and shaft set. The initial and third sprocket and shaft sets will rotate in the same direction. A fourth sprocket and shaft will be engaged with the third sprocket and shaft set. This will cause the forth sprocket and shaft to rotate counter to the third sprocket and shaft set. Thus, the second and fourth sprocket and shaft sets will rotate in the same direction and this direction will be opposite the direction the wheel rim is rotating. The effect of the mechanism is to produce a rotation counter to the rotation of the wheel rim.

DESCRIPTION

TECHNICAL FIELD

The invention pertains to the general field of Class 301: Land Vehicles: Wheels and Axels and more specifically to that pertaining to Subclass 5.1: Wheels.

BACKGROUND

Vehicles are being altered to make them more visually attractive for social, monetary and aesthetic reasons. One specific and relatively easy area of this alteration is in the area of wheels. The counterintuitive motion of the rotating section with the present invention draws attention to the accessory thereby creating an increased social and aesthetic presence while increasing the monetary value of the vehicle.

Previous patents pertaining to wheel enhancements have focused on an image or design of a wheel to give a certain effect achieved when they rotate at the same rate as that of the entire wheel. Such as in U.S. Pat. No. 5,931,543 and U.S Pat. No. 6,464,303. Other patents pertaining to wheel enhancements have focused on a portion of the wheel with the ability to spin free of the wheel allowing it to stay static in relation to the surroundings even while the wheel itself rotates. This is achieved by weighting that portion to inhibit rotation, thus causing the portion to contain a design in a set orientation independent of the wheel position and/or rotation. Such as in U.S. Pat. No. 6,471,302. The present patent differs from both of these ideas in the fact that the rotation of the rotating section is not independent of rotation, does not always move at the

same speed as the wheel rotation, and not necessarily in the same direction. Rather, the rotating section is influenced by the retardant transfer of rotational kinetic energy to the rotating section through the application of a bearing system and a sprocket system that would yield counter rotation.

SUMMARY OF INVENTION

The invention is a visually enhancing rotating portion of a wheel that counter rotates due to a system of sprockets and shafts connected to a rotating wheel. The wheelbase will have an attached system of sprockets that enable the outer rotating section to spin in the opposite direction than the direction of the rotating wheelbase. The rotational kinetic energy of the rotating wheelbase will be transferred, through a system of sprockets, to an outer rotating section. The result will be the appearance of wheels moving in the opposite direction than the vehicle is/was moving.

The rotational kinetic energy transfer to give a delayed reaction is accomplished using a bearing system that, in its nature, is not a direct connection and therefore does not allow for an immediate transfer of energy. Rather, the energy to achieve full rotational velocity of the rotating section is achieved slower due to frictional forces within the bearing system. If a rotational velocity difference between the rotary base and rotating section occurs for a sufficient amount of time the difference in velocity will continue to decrease until the rotating section reaches a rotational velocity equal to that of the rotary base. When the rotary base starts to decrease in velocity the same phenomenon will occur where the rotating section continues to spin faster than the rotary base until frictional forces reduce the speed of the rotating section until it equals that of the rotary base. The rotating section can take any form so as to give different visual effects. The rotating section can be weighted in different ways (different weights, different configurations, etc.) such that the rate of rotational kinetic energy transfer is either increased or decreased. The weighting of the rotational section should be in a way that will not inhibit rotation completely.

The sprocket system will enable the rotating section to spin in the opposite direction than the rotary base is moving. The bearing system will enable the rotating section to have a delayed reaction from the rotary base. The sprocket system combined with the bearing system will enable the overall invention to create a rotating section that is spinning in the opposite direction than the rotary base with a reaction that is delayed from the rotary base.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1.	Shows a cross sectional view as described in claim 2.
Fig. 1-A.	Shows the cross sectional view of the wheel base section.
Fig. 1-B-Side	Shows the cross sectional / side view as described in claim 2.
Fig. 1-B-Front	Shows the Front view as described in claim 2.
Fig. 1-C.	Shows a cross sectional view of the rotating section (the portion that rotates counter to the wheel).
Fig. 2-1 Side	Shows a cross sectional view of Fig 1-B-Side with the #1 Shaft (a) and sprocket (b) system highlighted.
Fig. 2-1 Front	Shows a cross sectional view of Fig 1-B-Front with the #1 Shaft (a) and sprocket (b) system highlighted.
Fig. 2-2 Side	Shows a cross sectional view of Fig 1-B-Side with the #2 Shaft (d) and sprocket (c & e) system highlighted.

Fig. 2-2 Front — Shows a cross sectional view of Fig 1-B-Front with the #2 Shaft (d) and sprocket (c & e) system highlighted.

Fig. 2-3 Side — Shows a cross sectional view of Fig 1-B-Side with the #3 Shaft (g) and sprocket (f & h) system highlighted.

Fig. 2-3 Front — Shows a cross sectional view of Fig 1-B-Front with the #3 Shaft (g) and sprocket (f & h) system highlighted.

Fig. 2-4 Side — Shows a cross sectional view of Fig 1-B-Side with the #4 Shaft (j) and sprocket (i) system highlighted.

Fig. 2-4 Front — Shows a cross sectional view of Fig 1-B-Front with the #4 Shaft (j) and sprocket (i) system highlighted.

Fig. 3 — Shows an isometric view of the entire shaft and sprocket system as described in claim 2.

DETAILED DESCRIPTION OF THE INVENTION

The center point of Fig. 1-C is arranged at the center point of Fig. 1-A with 1-B-Side fitting in the middle to constitute Fig. 1 as one unit.

Fig 2-1
Side and Front show the arrangement of the entire shaft and sprocket system with the first or initial sprocket (b) and shaft (a) highlighted.

Fig 2-2
Side and Front show the arrangement of the entire shaft and sprocket system with the second sprocket and shaft unit highlighted. The second sprocket and shaft unit contains two sprockets (c & e) and one shaft (d). One sprocket (c) is engaged with the initial sprocket (b) located up and to the right in the front view. The second shaft (d) connects the two sprockets (c & e) that make up the Second unit. The other sprocket (e) is engaged to one of the sprockets (f) in the third sprocket shaft unit.

Fig 2-3
Side and Front show the arrangement of the entire shaft and sprocket system with the third sprocket and shaft unit highlighted. The third sprocket and shaft unit contains two sprockets (f & h) and one shaft (g). One sprocket (f) is engaged with the second sprocket (e) of the second unit located directly to the left in the front view. The third shaft (g) connects the two sprockets (f & h) that make up the third unit. The other sprocket (h) is engaged to one of the sprockets (i) in the fourth sprocket and shaft unit.

Fig 2-4
Side and Front show the arrangement of the entire shaft and sprockets system with the fourth sprocket and shaft unit highlighted. The fourth sprocket and shaft unit contains one sprocket (i) and one shaft (j). The sprocket (i) is engaged with the second sprocket (h) of the third unit located down and to the right in the front view. The fourth shaft (j) connects the sprocket (i) to the rotating portion. The connection of the fourth shaft (i) and the rotating portion can be direct or through a bearing in order to retard the rotational energy transfer.

Fig 2-1, 2-2, 2-3 and 2-4
The first sprocket (b) and shaft (a) lies on the same spatial line as the forth sprocket (i) and shaft (j).
The second sprocket and shaft unit, which has two sprockets (c &e) and one shaft (d), lies on a spatial line parallel to the spatial line occupied by the first and forth sprockets and shafts.
The third sprocket and shaft unit, which has two sprockets (f & h) and one shaft (g), lines on a third spatial line that is parallel to the two spatial lines described above.

Fig 3
Is an Isometric view of the entire sprocket and shaft unit. Directional arrows show that if shaft (a) turns clockwise then sprocket (b) will also rotate clockwise. Sprocket (b) is engaged with sprocket (c) turning it counter-clockwise, which through shaft (d) turns sprocket (e) counter-clockwise. Sprocket (e) is engaged with sprocket (f), turning it clockwise, which through shaft (g) turns sprocket (h) clockwise. Sprocket (h) is engaged with sprocket (i), turning it counter-clockwise, which turns shaft (j) counter-clockwise.